

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

51. (Currently amended): A method for screening a small organic molecule for the ability to modulate heat shock protein receptor activity comprising:

- (a) contacting heat shock protein receptor positive cells with the small organic molecule; and
- (b) comparing the level of heat shock protein receptor binding activity in the heat shock protein receptor positive cells contacted with the small organic molecule to the amount of heat shock protein receptor binding activity in ~~the~~ such heat shock protein receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock protein receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted indicates that the small organic molecule has the ability to modulate heat shock protein receptor activity.

55. (Previously amended): The method of claim 51 wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the small organic molecule to bind to the heat shock protein receptor positive cells.

56. (Currently amended): A method for screening a molecule for the ability to modulate heat shock protein receptor activity comprising:

- (a) contacting heat shock protein receptor positive cells with the molecule; and
- (b) comparing the level of heat shock protein receptor binding activity in the heat shock protein receptor positive cells contacted with the molecule to the amount of heat shock protein receptor binding activity in ~~the~~ such heat shock protein receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock protein receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted indicates that the molecule has the ability to modulate heat shock protein receptor activity, wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the molecule to modulate the binding of a heat shock protein or a heat shock protein-peptide complex to the cells.

57. (Previously amended): The method of claim 51 or 56 wherein the heat shock protein receptor binding activity is the ability to interact with a heat shock protein receptor antibody.

58. (Previously added): The method of claim 56 wherein the molecule decreases the binding of the heat shock protein or the heat shock protein-peptide complex to the cells.

59. (Previously added): The method of any one of claims 56 to 58 wherein the heat shock protein is an Hsp70, an Hsp 90, or gp96.

63. (Previously amended): The method of claim 56 wherein the molecule is a peptide or protein, or derivative, analog or fragment thereof.

64. (Previously amended): The method of claim 63 wherein the peptide is a member of a peptide library.

65. (Previously amended): The method of claim 56 wherein the molecule is a small organic molecule, a nonpeptide, or an antibody.

66. (Previously added): The method of claim 65 wherein the nonpeptide is a member of a nonpeptide library.

67. (Previously amended): The method of claim 51 or 65 wherein the small organic molecule is a member of a small molecule library.

68. (Previously amended): The method of claim 51 wherein the small organic molecule is attached to a solid surface.

69. (Previously amended): A method for identifying a molecule potentially

useful for the treatment of cancer comprising carrying out the method of claim 51 or 56, further comprising the step of administering the molecule to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

70. (Previously amended): A method for identifying a molecule potentially useful for the treatment of an infectious disease comprising carrying out the method of claim 51 or 56, further comprising the step of administering the molecule to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

71. (Previously amended): A method for identifying a molecule potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim 51 or 56, further comprising the step of administering the molecule to a non-human animal suffering from an autoimmune disease, and determining whether the molecule ameliorates the autoimmune disease in the non-human animal.

77. (Previously amended): The method of claim 51 or 56, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

78. (Previously amended): The method of claim 51 or 56, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

79. (Currently amended): A method for screening a plurality of molecules for one or more molecules having the ability to modulate, directly or indirectly, the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells *in vitro* comprising:

- (a) contacting said plurality of molecules with: (i) heat shock protein receptor positive cells; (ii) a purified complex of a heat shock protein and a peptide; and (iii) cytotoxic T cells, under conditions conducive to the activation of cytotoxic T cells; and
- (b) comparing antigenic cell cytotoxicity of said T cells with the antigenic cell cytotoxicity of T cells contacted with said heat shock protein

receptor positive cells and said purified complex under said conditions,
but in the absence of said plurality of molecules,

wherein a lower or higher degree of cytotoxicity indicates that one or more molecules in said plurality of molecules modulates the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

80. (Currently amended): A method for screening an antibody specific to a heat shock protein or specific to a heat shock protein receptor for the ability to modulate, directly or indirectly, the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells *in vitro* comprising:

- (a) contacting the antibody with heat shock protein receptor positive cells and cytotoxic T cells under conditions conducive to the activation of cytotoxic T cells; and
- (b) comparing antigenic cell cytotoxicity of said T cells with the antigenic cell cytotoxicity of T cells contacted with said heat shock protein receptor positive cells under said conditions, but in the absence of said antibody,

wherein a lower or higher degree of cytotoxicity indicates that the antibody modulates the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells against the antibody.

81. (Currently amended): A method for screening a molecule for the ability to modulate, directly or indirectly, the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells *in vitro* comprising:

- (a) contacting the molecule with: (i) purified heat shock protein receptor positive cells; (ii) a purified complex of a heat shock protein and a peptide; and (iii) cytotoxic T cells, under conditions conducive to the activation of cytotoxic T cells; and
- (b) comparing antigenic cell cytotoxicity of said T cells with the antigenic cell cytotoxicity of T cells contacted with said heat shock protein receptor positive cells and said purified complex under said conditions,

but in the absence of said molecule,

wherein a lower or higher degree of cytotoxicity indicates that the molecule modulates the ability of heat shock protein receptor positive cells to stimulate the activation of cytotoxic T cells against the peptide.

82. (Currently amended): A method for screening a plurality of molecules for one or more molecules having the ability to modulate, directly or indirectly, antigen presentation activity of heat shock protein receptor positive cells comprising:

- (a) contacting said plurality of molecules with heat shock protein receptor positive cells;
- (b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said plurality of molecules; and
- (c) comparing antigen presentation activity by the heat shock protein receptor positive cells in the presence of said plurality of molecules with the antigen presentation activity by the heat shock protein receptor positive cells in the absence of said plurality of molecules,

wherein a lower or higher degree of antigen presentation indicates that one or more ~~molecule(s)~~ molecules modulates the antigen presentation activity of the heat shock protein receptor positive cells.

83. (Previously amended): A method for screening an antibody specific to a heat shock protein or a heat shock protein receptor for the ability to modulate, directly or indirectly, antigen presentation activity of heat shock protein receptor positive cells comprising:

- (a) contacting an antibody specific to a heat shock protein or a heat shock protein receptor with heat shock protein receptor positive cells;
- (b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said antibody; and
- (c) comparing antigen presentation activity by the heat shock protein receptor positive cells in the presence of the antibody with the antigen

presentation activity by the heat shock protein receptor positive cells in the absence of the antibody,

wherein a lower or higher degree of antigen presentation indicates that the antibody modulates the antigen presentation activity of the heat shock protein receptor positive cells.

84. (Previously amended): A method for screening a molecule for the ability to modulate, directly or indirectly, antigen presentation activity of heat shock protein receptor positive cells comprising:

- (a) contacting a molecule with: (i) a purified complex of a heat shock protein and a peptide; and (ii) purified heat shock protein receptor positive cells;
- (b) measuring antigen presentation by said heat shock protein receptor positive cells in the presence of said molecule; and
- (c) comparing the antigen presentation activity by the purified heat shock protein receptor positive cells in the presence of the molecule with the antigen presentation activity by purified heat shock protein receptor positive cells in the absence of the molecule,

wherein a lower or higher degree of antigen presentation indicates that the molecule modulates the antigen presentation activity of the heat shock protein receptor positive cells.

85. (Previously added): The method of claim 82, 83, or 84, wherein measuring antigen presentation is carried out by measuring representation of a peptide by an MHC molecule.

86. (Previously amended): The method of claim 81 or 84, wherein the molecule is a peptide or protein, or derivative, analog or fragment thereof.

87. (Previously amended): The method of claim 81 or 84, wherein the molecule is a small organic molecule or a nonpeptide.

88. (Previously added): The method of claim 87, wherein the nonpeptide is a member of a nonpeptide library.

89. (Previously added): The method of claim 87, wherein the small organic molecule is a member of a small molecule library.

90. (Previously amended): The method of claim 81 or 84, wherein the molecule is attached to a solid surface.

91. (Previously added): The method of claim 80 or 83, wherein the antibody is attached to a solid surface.

92. (Previously added): The method of claim 79, 80, 81, 82, 83, or 84, wherein the heat shock protein receptor positive cells are macrophage or dendritic cells.

93. (Previously added): A method for identifying a molecule potentially useful for the treatment of cancer comprising carrying out the method of claim 79, 81, 82, or 84, further comprising the step of administering the molecule to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

94. (Previously added): A method for identifying an antibody potentially useful for the treatment of cancer comprising carrying out the method of claim 80 or 83, further comprising the step of administering the antibody to a non-human animal having a tumor, and determining whether the antibody alters tumor progression in the non-human animal.

95. (Previously added): A method for identifying a molecule potentially useful for the treatment of an infectious disease comprising carrying out the method of claim 79, 81, 82, or 84, further comprising the step of administering the molecule to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

96. (Previously added): A method for identifying an antibody potentially useful for the treatment of an infectious disease comprising carrying out the method of claim 80 or 83, further comprising the step of administering the antibody to a non-human animal

infected with a pathogen, and determining whether the antibody ameliorates the infectious disease in the non-human animal.

97. (Previously added): A method for identifying a molecule potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim 79, 81, 82, or 84, further comprising the step of administering the molecule to a non-human animal suffering from an autoimmune disease, and determining whether the molecule ameliorates the autoimmune disease in the non-human animal.

98. (Previously added): A method for identifying an antibody potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim 80 or 83, further comprising the step of administering the antibody to a non-human animal suffering from an autoimmune disease, and determining whether the antibody ameliorates the autoimmune disease in the non-human animal.

99. (Previously added): The method of claim 79, 80, 81, 82, 83, or 84, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

100. (Previously added): The method of claim 79, 80, 81, 82, 83, or 84, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

101. (Previously amended): The method of claim 81 or 84, wherein the molecule is purified.

102. (Previously added): The method of claim 80 or 83, wherein the antibody is purified.

103. (Previously amended): A method for screening a peptide library for the ability to modulate heat shock protein receptor activity comprising:

- (a) contacting heat shock protein receptor positive cells with a member of a peptide library; and
- (b) comparing the level of heat shock protein receptor binding activity in the heat shock protein receptor positive cells contacted with the

member of the peptide library to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted,

wherein an increase or decrease in the amount of heat shock protein receptor binding activity in the contacted heat shock protein receptor positive cells relative to the amount of heat shock protein receptor binding activity in the heat shock protein receptor positive cells not so contacted indicates that the member of the peptide library has the ability to modulate heat shock protein receptor activity.

104. (Previously added): The method of claim 103 wherein the level of heat shock protein receptor binding activity is assayed by measuring the ability of the member of the peptide library to bind to the heat shock protein receptor positive cells.

105. (Previously added): The method of claim 103 wherein the heat shock protein receptor binding activity is the ability to interact with a heat shock protein receptor antibody.

106. (Previously added): The method of claim 103 wherein the member of the peptide library is attached to a solid surface.

107. (Previously added): A method for identifying a molecule potentially useful for the treatment of cancer comprising carrying out the method of claim 103, further comprising the step of administering the member of the peptide library to a non-human animal having a tumor, and determining whether the molecule alters tumor progression in the non-human animal.

108. (Previously added): A method for identifying a molecule potentially useful for the treatment of an infectious disease comprising carrying out the method of claim 103, further comprising the step of administering the member of the peptide library to a non-human animal infected with a pathogen, and determining whether the molecule ameliorates the infectious disease in the non-human animal.

109. (Previously added): A method for identifying a molecule potentially useful for the treatment of an autoimmune disease comprising carrying out the method of claim 103, further comprising the step of administering the molecule to a non-human animal suffering from an autoimmune disease, and determining whether the molecule ameliorates the

autoimmune disease in the non-human animal.

110. (Previously added): The method of claim 103, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

111. (Previously added): The method of claim 103, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

112. (Previously added): The method of claims 79 or 82, wherein the molecules are peptides or proteins, or derivatives, analogs or fragments thereof.

113. (Previously added): The method of claim 79 or 82, wherein the molecules are a small organic molecules or a nonpeptides.

114..(Previously added): The method of claim 79 or 82, wherein the molecules are attached to a solid surface.

115. (Previously added): The method of claim 79 or 82, wherein the molecules are purified.

116. (Previously added): The method of claim 69, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

117. (Previously added): The method of claim 70, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

118. (Previously added): The method of claim 71, wherein the heat shock protein receptor is selected from the group consisting of an Hsp70 receptor, an Hsp 90 receptor, and a gp96 receptor.

119. (Previously added): The method of claim 69, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

120. (Previously added): The method of claim 70, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.

121. (Previously added): The method of claim 71, wherein the heat shock protein receptor positive cells are purified from heat shock protein receptor negative cells.